**Cheyenne Software, Inc.**

ARCserve®/Open

The Backup Solution

Reference Guide

**Automated Unix®-based
data management software
for microcomputers.**

Value Added Software from Cheyenne

ARCserve®/Open Reference Manual

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Product Support:

If you have any questions regarding the use of **ARCserve/Open, please be sure to have your product serial number in hand and fill out the forms found in Appendix D. Next, FAX the forms and then call us at:**

> **516-484-3493 FAX**
> **516-484-5110 VOICE**
> **Monday through Friday**
> **8am-10pm EST**

Address any inquiries to:

Cheyenne Software, Inc.
55 Bryant Avenue
Roslyn, NY 11576
Attn: Technical Support

The Reference Manual

There are two manuals that accompany *ARCserve/Open*: this *Reference Manual* and the *User Guide*. The *Reference Manual* is intended for the root user who will be in charge of installation and program maintenance. The *User Guide* is intended for regular users who will be performing backup and restore operations.

Document Conventions

This manual uses different typefaces and symbols to distinguish between keys, information to be entered by you, menus, menu options, and fields.

The < > symbols enclose a specific key that is to be pressed. For example, the instruction, Type the following at the command line:

`arcserve`   **`<Enter>`**

means that you should type "arcserve" at the command line prompt and then press the **<Enter>** key. As you can see from this example, information to be entered by you appears on a separate line in **`bold courier 12 point`** type.

UNIX commands, such as **ls**, will appear in bold type wherever they are referenced.

Menus, menu options, lists, and form names appear in *italic type* within the body of the text but not within figures. Form fields appear in ***CAPITALIZED BOLD ITALICS*** which sets them off from the rest of the text and makes them easily distinguishable.

Quotation marks, aside from their normal use in writing, are also used to enclose messages which can appear on the screen.

Table of Contents

3. Program Theory 3-1

A. Troubleshooting A-1

B. Glossary & Abbreviations B-1

C. Activity Log & Job Status C-1

D. Customer Support Forms D-1

User Comments

Index Index 1

1. Introduction to ARCserve/Open

Welcome to the world of Cheyenne's ARCserve/Open, a backup and restore product, designed and implemented to work with SCO UNIX System V Release 3.2 and Open Desktop.

The *Reference Manual* is an important part of this package. All of the information that you will need to install ARCserve/Open is contained in this manual. In addition, you will find program theory, troubleshooting, a glossary of terms, and customer support forms.

1.1 ARCserve/Open Overview

ARCserve/Open is an intuitive menu driven program for backing up and restoring files, directories, or entire disks. ARCserve/Open includes the following features:

- **Multiple backup sessions on one tape** - With **cpio** or **tar**, you normally write to a tape only once. This means that if you back up your 10 MB directory to a 150 MB tape, you've wasted 140 MB of space. Using ARCserve/Open, you can run as many different backup sessions as you need until the tape is full.

- **Multiple tape drives** - You can have more than one tape drive attached to your system. If the backup exceeds one tape, ARCserve/Open automatically goes to the next drive (and tape) to continue the backup.

- **Selectively restore files from your tapes** - ARCserve/Open maintains a database of all backup operations. Using this database, you can selectively re-store files from any backup session. You can still choose to restore an entire backup session, but this option gives you added flexibility.

- **Schedule backup and restore jobs** - You can schedule backup and restore jobs to run automatically at any time, day, month, or year in the future. The jobs are stored in queues. You can have up to eight queues, each with a maximum capacity of 250 jobs.

- **Attended backup and restore** - Lets you perform backup and restore operations immediately, while you wait.

- **Point and select menus / forms** - Point to an option using the cursor keys, then select it by pressing **<Enter>**. Specify backup and restore information by entering it into forms. View backup options and data using these same clearly labeled forms. Wherever possible, fields on the data entry forms contain defaults to help make your job easier.

1.1.1   Notes for experienced UNIX users

If you are experienced with the UNIX operating system, you probably back up your hard disk by writing files to tape using **tar** or **cpio.** You might even be comfortable using these commands and their options. **tar** and **cpio** work, but they have their limitations and drawbacks:

- **Large learning curve** - It takes time to learn all the **tar** and **cpio** options, memorize them, and use them effectively.

- **Wasted tape** - With **tar** and **cpio**, it's not convenient to manage and write multiple backups out to tape.

- **Error recovery** - There is none with **cpio** or **tar**.

- **Scheduling** - **cpio** and **tar** provide none. You must use **cron** and **crontabs** to schedule jobs.

- **Selectively restore files** - There is no convenient method of doing this using **tar** and **cpio**.

ARCserve/Open provides you with a complete, intuitive, backup solution.

1.2 File Attributes

One important feature of ARCserve/Open is its ability to back up and restore all of the information on a hard disk, keeping intact the file and directory attribute information.

ARCserve/Open preserves permissions, dates, times, and ownership for all files. When restoring to hard disk, all attributes are put in place with the files and directories.

1.3 Terminology

The terms backup and restore can have slightly different meanings, depending on who's using them and in what context. Therefore, Cheyenne's definitions are explained below.

Backup is the process of copying directories and files from a hard disk to a tape drive. You will also notice that backup and back up appear in this manual. Backup is a noun or adjective. Back up is a verb.

Restore is the process of copying directories and files from a tape drive to a hard disk.

You can run either of the above operations in attended or unattended mode. In unattended mode, you can schedule the job to run on a specific date at a specific time. You can even schedule backup jobs to repeat at regular intervals.

1.4 Help

There are two levels of help available to users responsible for maintaining ARCserve/Open: The *Troubleshooting Section* of this manual and Technical Support.

The troubleshooting information is in *Appendix A*.

Technical Support is available to every registered ARCserve/Open user. To become a registered user, complete the registration card that came with the program and return it to Cheyenne Software, Inc.

To help us serve you quickly and efficiently, please fill out the forms in *Appendix D* before calling tech support. The forms contain questions about the hardware and software you are using, and the exact nature of your problem. If possible, FAX the forms to us so we can get a head start on solving your problem. The phone numbers are at the begining of *Appendix D*.

2. Installing ARCserve/Open

This section covers the following topics:

* UNIX operating system requirements

* Hardware requirements

* Installing ARCserve/Open

* Stopping and starting the server

After you finish installing ARCserve/Open, refer to the *User Guide* for information about starting and using the program.

2.1 Software and Hardware Requirements

2.1.1 Software

ARCserve/Open works with SCO UNIX System V Release 3.2, specifically the following versions:

- SCO 386 System V Release 3.2 (Version 2.0 and above)

- SCO Open Desktop (ODT) Version 1.1 and 2.0

You can check which version of the operating system you are running by typing **uname -X**.

2.1.2 Hardware

If you already have SCO UNIX running on your PC (see *Software* above), you probably also have all the hardware you need to run ARCserve/Open. Just for your information though, we recommend the following UNIX configuration:

- 386 or 486 computer

- 40-80 Megabyte hard drive

- 4 Megabytes of memory

- A SCSI host adapter (mandatory)

- A Cheyenne certified tape drive

To receive a list of certified drives, please contact the Sales Department at Cheyenne.

2.2 Installing ARCserve/Open

You will use the UNIX installation utility, **custom**, to install ARCserve/Open . The only piece of information that you will need to provide is the type of SCSI host adaptor installed in your system.

1.   Login as root on the system console (**<Alt> <F1>**).   ☐

NOTE: Normally when you perform system administration tasks (like installing software packages) the system should be in single user mode. Although you can install ARCserve/Open while in multi-user mode, you should consult your System Administrators Guide to avoid potential problems.

2.   Start custom by typing the following command: ☐

    # custom   <Enter>

The **custom** screen is displayed (Figure 2-1), with 4 menu options across the top and a list of currently installed products.

NOTE: The "*Products Currently Installed*" shown here may not match yours exactly.

```
Install Remove List Quit
Install Software
┌──────────────────────────────────────────────────────────────────────┐
│ /                                        Thursday March 12, 1992  9:45 │
└──────────────────────────────────────────────────────────────────────┘
┌─────────────────────── Products Currently Installed ───────────────────┐
│                                                                        │
│                                                                        │
│ Open Desktop                                                           │
│ Open Desktop Development System                                        │
│ Open Desktop Server                                                    │
│ Open Desktop Update F                                                  │
│                                                                        │
│                                                                        │
└────────────────────────────────────────────────────────────────────────┘
```

Figure 2-1 Select Install

3.   Press **<Enter>** to select "Install" from the **custom** Main Menu.   □

The *install* screen is displayed.

```
┌─────────────────────────────────────────────────────────────────────┐
│/                                    Thursday March 12, 1992   9:45│
└─────────────────────────────────────────────────────────────────────┘
       ┌─────────────────────── Install ───────────────────────┐
       │                                                        │
       │                                                        │
       │  Select a product : [░░░░░░░░░░░░░░░░░░░░░░░░░░░░░]     │
       │  Choose an option : [Entire product]  Package   Files  │
       │                          ┌────────────────────────────┐│
       │                          │ *    A New Product         ││
       │                          │      Open Desktop          ││
       │                          │      Open Desktop          ││
       │                          │      Development           ││
       │                          │      Open Desktop Server   ││
       │                          │      Open Desktop Update f  ││
       └──────────────────────────┴────────────────────────────┘
```

Figure 2-2 Install Screen

4.   Press **<Enter>** to accept the default answer, "*A New Product*".   □

The same screen is displayed, this time with "*Entire product*" selected (Figure 2-3).

```
┌─────────────────────────────────────────────────────────────────────┐
│/                                    Thursday March 12, 1992   9:45│
└─────────────────────────────────────────────────────────────────────┘
       ┌─────────────────────── Install ───────────────────────┐
       │                                                        │
       │                                                        │
       │  Select a product : [A New Product           ]         │
       │  Choose an option : [▓Entire product▓]  Package   Files│
       │                                                        │
       │                                                        │
       │                                                        │
       └────────────────────────────────────────────────────────┘
```

Figure 2-3 Install A New Product

5.   Press **<Enter>** again to accept the default answer, "*Entire Product*".   □

The following screen is displayed:

```
┌─────────────────────────────────────────────────────────────────────┐
│ /                                    Thursday March 12, 1992   9:45  │
└─────────────────────────────────────────────────────────────────────┘
┌────────────────────────── Install ──────────────────────────────────┐
│                                                                      │
│                                                                      │
│   Insert:   Distribution                                             │
│             Floppy Volume 1                                          │
│                                                                      │
│   ▓Continue▓   Quit                                                  │
│                                                                      │
│                                                                      │
│                                                                      │
│                                                                      │
└──────────────────────────────────────────────────────────────────────┘
```
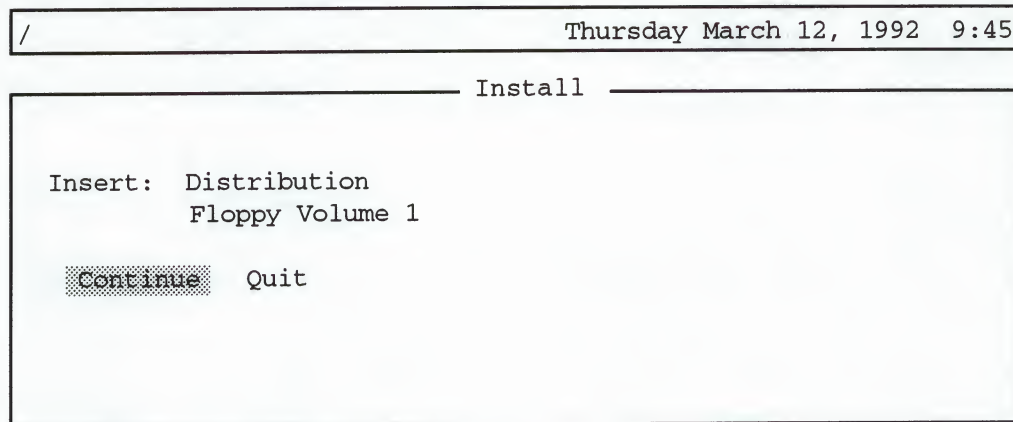
Figure 2-4 Insert The ARCserve/Open Floppy

6.   Insert the ARCserve/Open Floppy Volume 1 in the floppy drive then press
      <Enter> to continue.   □

The **custom** program reads some data files from the diskette, then displays the
following message:

   "Insert: ARCserve/Open Floppy Volume 1".

7.   Press **<Enter>** to continue.   □

Custom reads the data from the first disk then displays a message that asks you to:

   "Insert: ARCserve/Open Floppy Volume 2".

8.   Insert the ARCserve/Open Floppy Volume 2 then press **<Enter>** to
      continue.   □

The **custom** program installs the files from the second disk. After all ARCserve/Open files are installed on the hard disk, the following menu is displayed:

```
Select a SCSI Host Adapter from one of the following:

1. Adaptec AHA 154x, AHA 1640
2. Adaptec AHA 1740


Enter Choice or enter q to quit
```

Figure 2-5 Select Your SCSI Host Adapter

9.   Enter the number that corresponds to the SCSI Host adapter installed in your system. □

The device driver is then installed in your system. The name of each file is displayed as it is installed/added to your system. After all the device driver files are in place, the following message is displayed:

"The UNIX Kernel has been rebuilt."

"Do you want this kernel to boot by default? (y/n)"

10.   Enter "y" to use the new Kernel by default. □

The following message is displayed:

"Do you want the kernel environment rebuilt? (y/n)"

11.   Enter "y" to rebuild the kernel environment. □

12. After the rebuild is finished, press **<Enter>** until you are back at the
    Custom Main Menu (Figure 2-6). □

```
/                                        Thursday March 12, 1992  9:45

                      ─────Products Currently Installed ──────
┌─────────────────────────────────────────────────────────────────────┐
│                                                                       │
│    Open Desktop                                                       │
│    Open Desktop Development System                                    │
│    Open Desktop Server                                                │
│    Open Desktop Update f                                              │
│    ARCserve/Open                                                      │
│                                                                       │
│                                                                       │
│                                                                       │
└─────────────────────────────────────────────────────────────────────┘
```

2-6 ARCserve/Open Is Now Installed On Your System

You should see "ARCserve/Open" on the "Products Currently Installed" list.

13. Type "q" then press **<Enter>** to quit custom. □

The ARCserve/Open program and files are now installed on your system in
/usr/lib/arcserve and /usr/bin.

NOTE: Since the installation procedure made some changes to the kernel, you
must reboot your system at this point for the changes to take effect.

2.3   Starting and Stopping the Program

Before you can start the ARCserve/Open program (frontend), you must start the backend (or server). The following sections show you the commands for starting the server, starting the program (frontend), and stopping the server.

NOTE: You should start the server on the system console screen (**<Alt F1>**), and start the front end on another screen.

2.3.1   Starting the ARCserve/Open Server (backend)

The following command starts the ARCserve/Open server:

```
#     server start&          <Enter>
```

You can specify two options (flags) when starting the server: **-d** and **-a**. The **-d** option causes debugging information to be written to the system console (**<Alt F1>**) while ARCserve/Open is running. The **-a** option causes anything that is written to the Activity Log to be written to the system console.

If you are having trouble with your system or ARCserve/Open, start the server with debugging turned on by typing:

```
#     server -d start&     <Enter>
```

The debugging information generated by ARCserve/Open is useful to our Technical Support Department for solving any problems you might have.

If you want to check statistics about a job without having to look in the *Activity Log*, start the server with the -a option

```
#     server -a start&     <Enter>
```

The Activity Log information generated by ARCserve/Open will be displayed on the system console (**<Alt F1>**).

2.3.2   Starting the ARCserve/Open Program (frontend)

The following command starts the ARCserve/Open program (frontend):

```
#    arcserve              <Enter>
```

2.3.3   Stopping the ARCserve/Open Server

You can stop the ARCserve/Open server (after quitting the frontend) by typing the following command:

```
#    server stop           <Enter>
```

2.3.4   Maintaining the FTS Database

There are two commands that you can use to maintain the FTS Database.

*   ftsverify

*   ftsbuild

Use ftsverify to check the integrity of the FTS Database. As the database gets larger, its ability to access files quickly may decrease. This is due mostly to the index getting large and unorganized. ftsverify rebuilds the index which in turn optimizes database performance.

To optimize your database, type the following command at the console:

```
#    ftsverify             <Enter>
```

Use ftsbuild to create a new, empty FTS Database. If the database becomes too large or unusable you may want to run this command .

NOTE: This command complete destroys your current FTS Database.

You can selectively add old records to the new FTS Database by using the tape merge feature. (See the *User Manual.*)

To optimize your database, type the following command at the console:

```
#    ftsverify             <Enter>
```

3. Program Theory

This chapter covers the following topics:

- Advantages of the Client/Server model and how ARCserve/Open fits this model

- A general overview of the program architecture including the following:

  queues

  the FTS Database

  ARCserve/Open's device independence

- ARCserve/Open and the network

- System Security

- File and directories
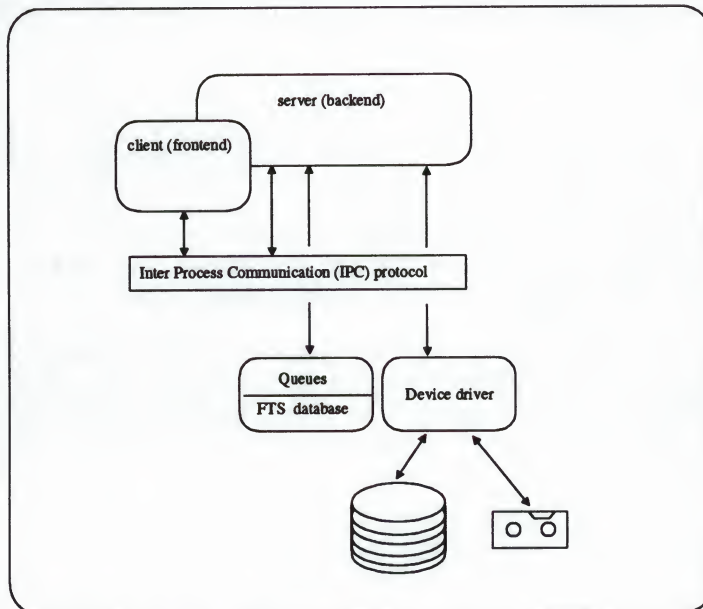
Figure 3-1 The Basic Program Architecture

3.1 Design

ARCserve/Open's design is based on a client/server model. Under this model, applications are composed of two parts, the client process and the server process. In ARCserve/Open, the server process is referred to as the backend and the client process is referred to as the frontend.
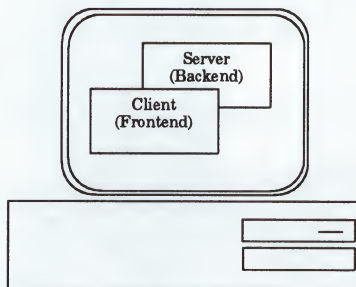
Figure 3-2 ARCserve/Open Uses The Client-Server Model

The function of the ARCserve/Open client and server processes is described below:

*   **ARCserve/Open Client (frontend)** - provides the user interface to the program. All menus, lists, and forms are displayed by the client (frontend) module. Once you submit a form, the ARCserve/Open client passes the information to the ARCserve/Open server for actual processing.

*   **ARCserve/Open Server (backend)** - executes backup and restore jobs, compiles reports, and communicates with the devices. It gets instructions from the ARCserve/Open client module, then processes and acts on these instructions.

3.2 Architecture

The purpose of this section is to give you a basic understanding of the
ARCserve/Open program and its various components. The descriptions are over-
simplified on purpose, but they do accurately represent the basic program
architecture.

We will focus on four unique components of the ARCserve/Open architecture. These
components, all working together, make up the ARCserve/Open program. The
pieces are:

•   Client/Server (frontend and backend)

•   Inter Process Communication (IPC) for client server communications and
    memory management

•   Queues and the File Tracking System (FTS) Database for controlling and track-
    ing backup and restore operations

•   Device driver (for hardware independence)

3.2.1 Client / Server model

As described earlier in this chapter, the client (frontend) is the part of the program
that provides the user interface. The server (backend) handles the actual process-
ing. The server runs in the background, without requiring a dedicated virtual
screen. The client runs in the foreground, requiring a dedicated virtual screen.
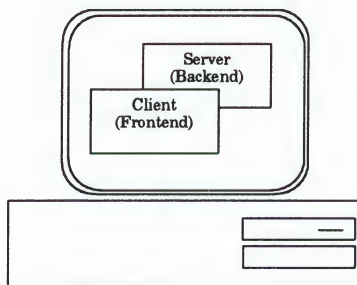
Figure 3-3 Client In Foreground / Server In Background

3.2.2 Communication between Client and Server

The UNIX Inter Process Communication (IPC) system is the link between the ARCserve/Open client and server processes. It also coordinates the activities between client and server.
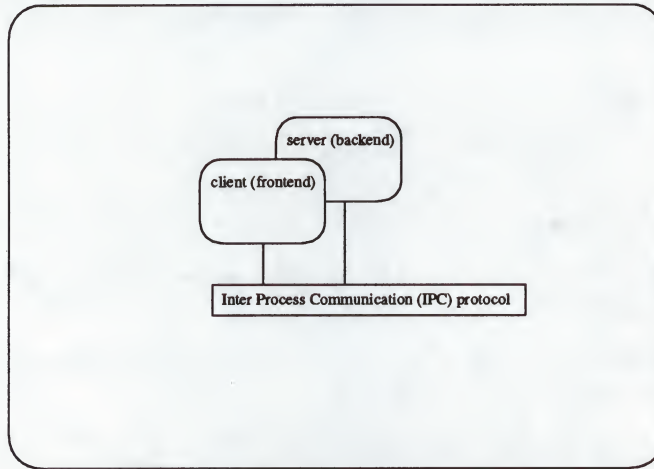
Figure 3-4 IPC Links The Frontend And Backend

3.2.3 Queues, Scheduling, and the File Tracking System

The server (backend) communicates directly with the queues (for scheduling jobs) and the File Tracking System (FTS) Database.
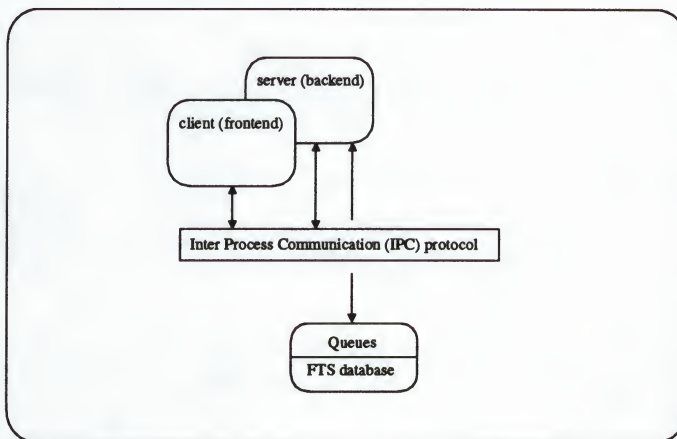
Figure 3-5 Queues For Scheduling/FTS For Tracking Jobs

The queues are used to store scheduling information for unattended jobs.

ARCserve/Open's scheduling mechanism normally sleeps. It only awakens when a job is submitted to a queue, or a job becomes due (its execution time is reached). For example, if you schedule a job to run at 12:00 pm, and it is now 6:00 am, the scheduling mechanism awakens, determines that the job is to be executed in 6 hours, then goes back to sleep. In 6 hours, it awakens again and processes the 12:00 pm job that is now due.
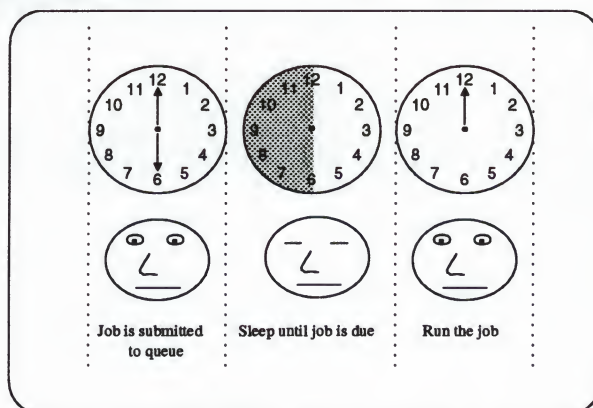
Figure 3-6 The Scheduling Mechanism Is Usually Asleep

If at 7:30 am someone schedules a job to run at 10:00 am, the scheduling mechanism awakens, adjusts the sleep interval from 5 hours to 2-1/2 hours (10:00 minus 7:30), then goes back to sleep. After 2 1/2 hours it awakens and executes the 10:00 am job.

After the 10:00 am job is finished, the scheduling mechanism goes to sleep until the next job is due. If it took 20 minutes to execute the job, and the next job is the 12:00 pm job, the system will sleep for 1 hour and 40 minutes. After 1 hour and 40 minutes, it awakens, runs the 12:00 job, and goes back back to sleep.

On rare ocasions, many jobs may become due at the same time. This could happen if your system is down and while it is down jobs waiting in the queues become due. When the system comes back up, it is faced with many jobs, all due and ready to be processed. To determine which "ready" job should go first, the scheduling mechanism checks the job's queue priority.

Jobs from a high priority queue (such as 1) will go first, regardless of the time at which they were originally scheduled to run. For example, if it is 11:00 am and two jobs are active, one scheduled for 9:00 am with queue priority 2, the other scheduled for 10:00 am with queue priority 1, the priority 1 job will go first, even though it has a later execution time.

The File Tracking System (FTS) Database contains backup and restore information such as when the operation was performed, whether it was successful or not, and original location of the files. You can also choose not to have information recorded in the FTS database by saying "NO" to *Track Files* on the job entry forms.

When a tape is overwritten, ARCserve/Open removes the session records that tape from the database so that the database stays current. When this occurs, it is detailed in the *Activity Log* (see *Appendix B* in this manual).

To maintain the FTS Database at a manageable size, we suggest that you periodically purge it of obsolete records (see the *User Guide*, section 7.2 for details).

3.2.4 Device Driver

A device driver, installed when you installed ARCserve/Open, is what makes the program virtually device independent.
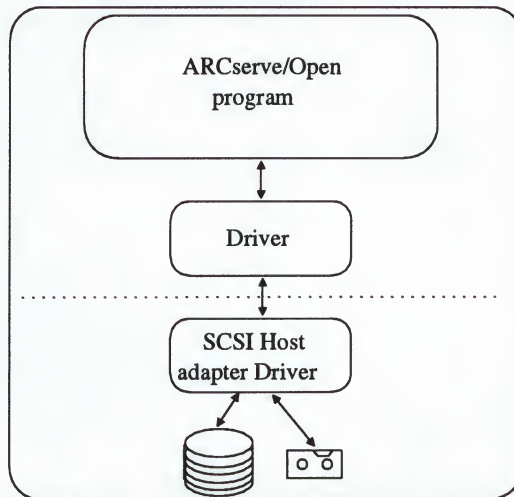
Figure 3-7 Special Driver For Device Independence

The device driver is the link between ARCserve/Open and the lower level SCSI host adapter driver. The ARCserve/Open program only needs to know how to communicate with the driver. The driver in turn knows how to communicate with a variety of SCSI devices.

3.3 ARCserve/Open and the Network

ARCserve/Open is designed around the client/server model. In network terminology, a server is installed and running on one system, and a client is installed and running on many systems. The server system has a tape drive attached to it. The clients all submit jobs from their systems and the server processes the jobs, writing to and reading from the tape.

In ARCserve/Open, both the client and the server are installed on, and running on, the same system. To back up files from remote systems, use the Network File System (**nfs**) to mount remote hard disks on your file system.
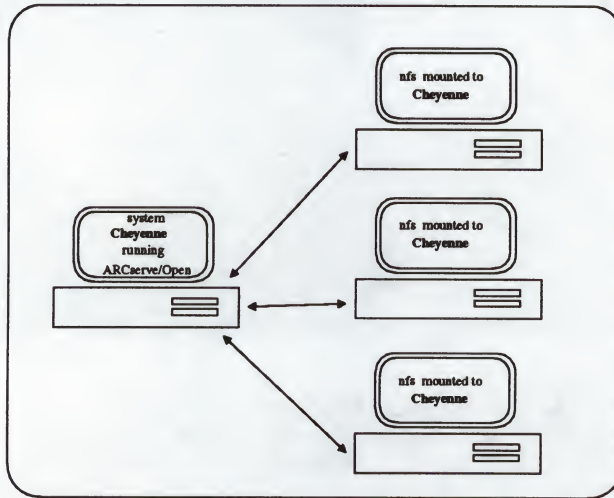
Figure 3-8 Use nfs To Access Remote File Systems

If a remote volume is mounted on your file system, and you have free access to it, you can back up or restore it as if it were local. See your *UNIX System Administrator's Guide* for more information about **nfs**.

3.4 ARCserve/Open Files and Directories

The ARCserve/Open executable files are installed in /usr/bin. All other associated files and directories are installed in /usr/lib/arcserve. The following figure shows the ARCserve/Open directory structure:
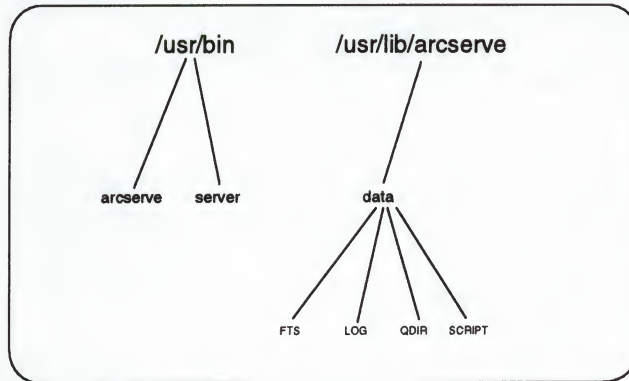
Figure 3-9 ARCserve/Open Directory Structure

The following table lists the contents of the ARCserve/Open data directories:

Directory	Purpose
FTS	Contains all the File Tracking System data files
LOG	Contains the Activity Log data file
QDIR	Contains the queue data files
SCRIPT	Contains the script files

NOTE: Do not open or edit these files using normal UNIX commands. If you do open them using UNIX commands, you risk corrupting them.

3.5 Security

Although no system is 100% secure (unless you never turn it on), ARCserve/Open does provide a few features that enhance security on your system. Only root can set up and administer queues. He authorizes users and operators for each queue.

The assigned Queue Users can submit jobs to a queue, as well as delete, modify, put on hold, and reschedule their own jobs. Queue Operators can delete, modify, reschedule, put on hold, and change the order of any job in the queue to which they are assigned.

Passwords can be entered for backups which are then required for restore operations. Each tape session can have a password linked to it. Only people who know the password (or the root user) can access that session on the tape.

A. Troubleshooting

Problem

Solution[s]

I connected a tape drive, but it doesn't appear on the list of drives available from the *Select* option on the *Tape Maintenance Menu*.

Select *Reset* from the *Tape Maintenance Menu* or stop then restart the server. Information about tape drives currently connected to your computer doesn't get updated until after you perform one of the above operations.

Make sure that each SCSI device has a unique ID number. If two devices share the same number, ARCserve/Open will be unreliable or fail to function at all. You can check tape drive IDs using the *Select* Option on the *Tape Maintenance Menu*.

Make sure the last device in the SCSI chain is terminated properly. The first and last device in the chain should be terminated with a terminating resistor. Check the manual that came with your tape drive[s] for terminating information.

The cable, host adapter, or tape drive could be defective. If possible, try a different one of each.

I am not able to submit jobs to a queue

You must be authorized to use a queue before you can submit jobs to it. See *Chapter 4* in the *User Manual* for information about authorizing queue users or talk to your system administrator.

I don't seem to have access to all the ARCserve/Open options

Some options (such as queue management) are only available to the root user. You must login as the root user then run ARCserve/Open to have access to all options.

Problem	Solution[s]
The script lists don't appear before the job entry forms	Most script lists won't appear until after you create and save your first script.
When scheduling Unattended jobs, after I select a queue from the list of queues, the Scheduled Job list appears empty.	If there are no jobs scheduled in the queue you selected, the *Scheduled Job List* is empty except for the headers across the top of the screen.
I entered a password on a backup form, but I can't remember what it is.	The root user can restore any job, without entering the password. Login as root then run ARCserve/Open.
I can't remember the name of the tape I want to use.	You can either enter an asterisk (*) for the tape name or use *Locate / QFA Restore* on the *File Tracking System Menu* to get a list of tapes that are being used with ARCserve/Open.
The files I backed up aren't part of the File Tracking System.	Make sure the *Track Files Field* on the Backup Job Entry form is set to "YES". If it is set to "NO", the files will not be tracked in the File Tracking System.

B. Glossary & Abbreviations

Glosary

ARCserve/Open - Cheyenne's backup and restore software package for SCO UNIX

Attended Mode - a state of operation that performs the backup or restore immediately and requires a dedicated terminal (or virtual screen)

Backup (noun) - a copy of files/directories

Back up (verb) - the process of copying files/directories from a disk volume to a tape drive

Client - the front end module that is a part of the Client/Server model. It provides the user interface to ARCserve/Open.

Client/Server Model - a model for software design that divides the software into two modules, the Client, or front end, and the Server, or backend. This helps keep the program down to a manageable size and makes more economical use of system resources.

Complete Back up - all files are copied to the destination regardless of date/time

custom - UNIX install utility. Allows you to install and remove user programs (like ARCserve/Open) and parts of the operating system.

File Tracking Sytem (FTS) Database - a database containing records about backups performed by the ARCserve/Open Program.

Incremental Backup - a method used to copy files selectively based on criteria that you supply.

Restore - the process of copying files from a tape drive to a hard drive or file system mounted on your hard drive

SCSI - an industry standard interface commonly used for devices such as tape drives.

Server - the module that is a part of the Client/Server model. It performs the processor intensive work, such as running scheduled backups and restores

System V Release 3.2 - the version of UNIX that ARCserve/Open works with. ARCserve/Open is currently designed to work with the Santa Cruz Operation's (SCO) version of the operating system.

Terminating Resistor - should be on the last SCSI drive in a chain of SCSI drives.

Unattended mode - a state of operation that does not require your intervention; you schedule the tasks by setting a time, date, and repeat interval and ARCserve/Open does the rest.

Abbreviations

ANSI - American National Standards Institute

ASCII - American Society Code for Information Interchange

DAT - Digital Audio Tape

FTS - File Tracking System

I/O - Input/Output

IPC - Inter Process Communication protocol

ISA - Industry Standard Architecture

KB - Kilobytes

KBYTES - Kilobytes

NFS - Network File System

QFA - Quick File Access

QIC - Quarter Inch Cartridge

SCO - Santa Cruz Operation

SCSI - Small Computer Systems Interface

SVR3.2 - UNIX System V Release 3.2

C. Activity Log & Job Status

The Activity Log records all of ARCserve/Open's activities and the errors that occur during each recorded unattended archiving or backup job session. The Activity Log is a master file that includes all of the information available in Error Log Files created with *Unattended Job Entry Forms*.

The following information is recorded for each session:

- Date and time the operation took place

- Type of operation

- Queue and user name

- Source and Destination for the operation

- Errors (if any)

- Session Status (failed or completed)

- #Bytes, # Files, # Directories - for backups

- Average throughput of the operation (in KB per minute)

The Session Status can be either Complete, Incomplete, Failed, or Cancelled.

Complete indicates that all files requested were copied.

Incomplete indicates that one or more files were not copied. If a file is open during back up, the file is not copied and an Incomplete status is recorded in the Activity Log.

A **Failed** status, for example, can result from not having permission to access the file you specified.

Cancel results from termination of the job by the user, or by ARCserve/Open when abnormal conditions (e.g., no disk/directory space) are detected.

A sample Activity Log is shown on the following page.
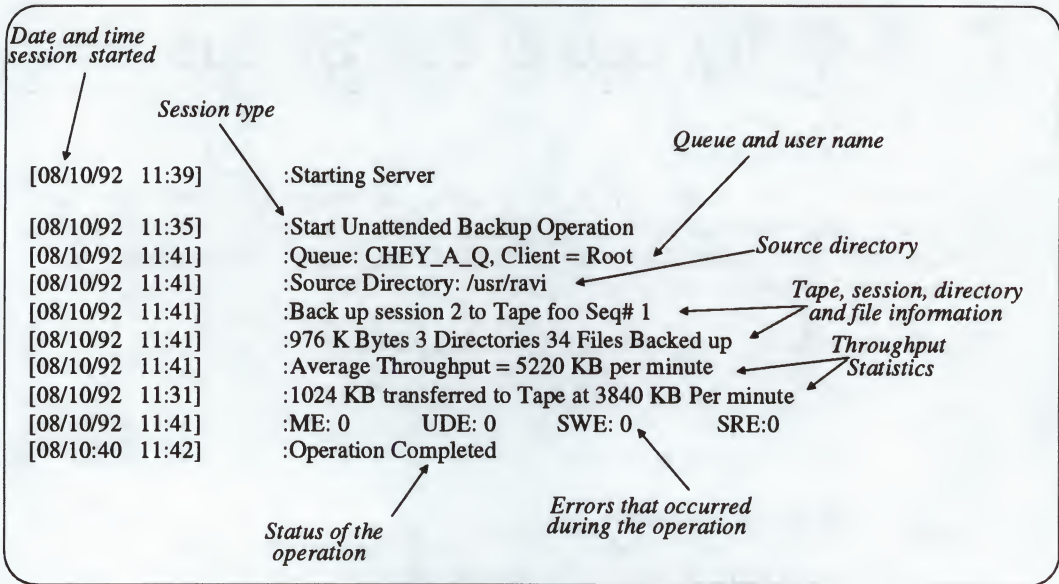
Figure C-1   Small sample Activity Log

D. Customer Support Forms

Before calling our Technical Support Department please complete the applicable Customer Support Forms that follow. You may want to photo-copy the forms first, so that you will have blank forms for future use.

If possible, FAX these forms to us first, so that we have all the information that we will need to begin assisting you.

516-484-3493   FAX #

516-484-5110   Voice #

CUSTOMER INFORMATION
NAME
COMPANY NAME
ADDRESS 1
CITY   STATE   ZIP
ADDRESS 2
CITY   STATE   ZIP
PHONE - VOICE
PHONE - FAX
OTHER CONTACTS

PROBLEM DESCRIPTION
#

ARCSERVE/OPEN INFORMATION		
VERSION	SERIAL NUMBER	PURCHASED THROUGH

BASIC COMPUTER INFORMATION							
NAME	BRAND	MODEL	TYPE	CPU SPEED	BUS SPEED	VIDEO TYPE	BIOS
SCO JYSV	DELL	SYS33D	386 ISA	33	8	VGA	AMI 2

MAIN MB	MEMORY SPEED	EXTERNAL MEM MB	SPEED	# PORTS SERIAL	PARALL	SHADOW VIDEO RAM	WAIT STATES
8	80 nS	4	120 nS	2	2	YES	O

HARD DISK DRIVES						
DISK #	BRAND	MODEL	TYPE	CAPACITY MB	ACCESS SPEED	INTERNAL EXTERNAL
O	MAXTOR	4380S	SCSI	330	15 mS	INTER

HARD DISK CONTROLLERS

BRAND	TYPE	IRQ	DMA	PORT	MEMORY	SLOT #	CONTROLS DRIVES #
ADAPTEC 1542A	11	5	330	CA00	2	0 AND 1

FLOPPY DRIVE INFORMATION

DISK DESIGN	BRAND	MODEL	FORM FACTOR	CAPACITY
A:	TEAC	223 XYZ	5'14	1.2 MB

OTHER SPECIAL HARDWARE IN SYSTEM

NAME	DESCRIPTION

TAPE DRIVE INFORMATION								
BRAND	MODEL	OEM	CAPA-CITY	INT EXT	AGE YRS	TAPE BRAND	SCSI ID	TERMI-NATED
EXB Tape Rec	VAST 8200	EXABYTE	2.2GB	EXT	1	SONY	O	YES

TAPE DRIVE ADAPTER CARD					
BRAND	TYPE	IRQ	DMA OR PIO	PORT	MEMORY ADD
ADAPTEC	1540 B	10	6	234	— — —
WAIT STATE	DMA SPEED	SCSI ID	BIOS DIS	AUTO SENSE	PARITY
O	5	7	YES	DIS	OFF

| UNIX VERSION		
TYPE (286 or 386)	VERSION	TOTAL # USERS
SCO SYSTEM V/386	RELEASE 3.2 v.4	4

Index

User Comments

Cheyenne is always looking to improve its products and therefore, we would like to hear your comments!

Please let us know about inaccuracies, areas that could use more information, unclear instructions, and ways to improve our written manuals and on-line help. Of course, suggestions about the software are always welcome.

You can address these suggestions to:

Technical Publications Manager
Cheyenne Software, Inc.
55 Bryant Avenue
Roslyn, New York 11576.

THANK YOU!

Cheyenne Software, Inc.
55 Bryant Avenue
Roslyn, NY 11576